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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/668,224

09/24/2003.

Satoshi Arakawa

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11/15/2005

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EXAMINER

GAGLIARDI, ALBERT J

ART UNIT

PAPER NUMBER

2884

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/668,224

Applicant(s)

ARAKAWA, SATOSHI

Examiner

Albert J. Gagliardi

Art Unit

2884

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/24/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 2 and 3, the limitation that the light receiving portions are arranged in a direction to the perpendicular to the main scanning direction over a distance of twice (claim 2) or five times (claim 3) the width of the stimulating beam is indefinite because the width of the beam is variable or undefined. See MPEP 2173.05(b) noting that it has been held that a claim may be rendered indefinite by reference to an object that is variable. In this case, because the width of the beam is variable and/or undefined, one skilled in the art would be unaware of the subsequent width of the line sensor

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Arakawa (US 2002/0040973).

Regarding claim 1, *Arakawa* discloses (Figs.7-8) a radiation image read-out apparatus which is provided with a line sensor (17') which detects stimulated emission emitted from a radiation image convertor panel (13) upon exposure to a line-like stimulating light beam (10) extending in a main scanning direction (X) and reads out a radiation image recorded on the radiation image convertor panel while moving the line sensor and the radiation image convertor panel relatively to each other in a sub-scanning direction (Y) intersecting the main scanning direction, wherein the line sensor (17') comprises a CCD having a number of light receiving portions two-dimensionally arranged along the main scanning direction (par. 0151; fig. 8) and outputs electric charges obtained by photoelectrically converting the stimulated emission received by the light receiving portions after binning the electric charges in a direction perpendicular to the main scanning direction (par. 0151).

Regarding claim 4, *Arakawa* discloses that the light receiving portions are smaller in the pixel size in the main scanning direction (i.e., 12.5  $\mu\text{m}$  – see par. 0144) than a pixel size which is the largest in pixel sizes at which a radiation image can be read out from the radiation image convertor panel at a predetermined resolution (i.e., 100  $\mu\text{m}$  or 200  $\mu\text{m}$  – see par. 0145-0147).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Arakawa* as applied above, and further in view of Isoda (US 2001/0052582 A1).

Regarding claims 2-3, as best understood, although *Arakawa* does not particularly disclose the width of the stimulating light beam, *Arakawa* discloses that in at least some embodiments, the light receiving portions are arranged in a direction perpendicular to the main scanning direction over a distance at least four times greater than the width of a single row array (compare figs. 4 and 8) suggesting a width at least equal to  $50\text{ }\mu\text{m}$  ( $4 \times 12.5\text{ }\mu\text{m}$  – see par 0129). In addition, those skilled in the art appreciate that width of the light beam irradiated onto the conversion panel can vary widely and that widths of  $10\text{ }\mu\text{m}$  to  $4000\text{ }\mu\text{m}$  are preferable (see for example *Isoda* at par. 0014) which suggests that the distance is equal to or greater than 2 (claim 2) or 5 (claim 3) times the width of the stimulating beam when the beam width is a preferable width such as  $10\text{ }\mu\text{m}$ .

7. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Arakawa* as applied above, and further in view of *Isoda* (US 2002/0100885 A1).

Regarding claims 5-6, although *Arakawa* discloses that the line sensor is provided with a distributed index lens, those skilled in the art appreciate that a wide variety of functionally equivalent lens arrangements including microlens arrays extending in a direction perpendicular to the main scanning direction (i.e., flat-plate microlens arrays) are known in the art (see for example *Isoda* 2002/0100885 at par. 0703, figs. 44 -5) and, absent some degree of criticality would have been an obvious design choice such lens would obviously if not inherently, be provided over an area including the light receiving portions and the charge transfer portions of the CCD.

### ***Conclusion***

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8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert J. Gagliardi whose telephone number is (571) 272-2436. The examiner can normally be reached on Monday thru Friday from 10 AM to 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Albert J. Gagliardi  
Primary Examiner  
Art Unit 2884

AJG